

**In the Claims:**

Please cancel claims 4 and 7 to 15 without prejudice and add the following claims 16 to 27:

1(previously presented). An optical element for an optical data transfer device said optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35 and a density ( $\rho$ ) that is less than or equal to  $4.5 \text{ g/cm}^3$ .

2(previously presented). The optical element as defined in claim 1, wherein said Abbé number ( $v_d$ ) is greater than or equal to 40.

3(previously presented). The optical element as defined in claim 1, wherein said density ( $\rho$ ) that is less than or equal to  $4.3 \text{ g/cm}^3$ .

4(canceled).

5(previously presented). A read-and-write device for optical data transfer, said read-and-write device comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) that is greater than or equal to 35 and a density ( $\rho$ ) that is less than or equal to  $4.5 \text{ g/cm}^3$ .

6(previously presented). The read-and-write device with a movable read-write head and at least one optical element, said at least one optical element comprising an optical glass with an index of refraction ( $n_d$ ) greater than or equal to 1.70, an Abbé number ( $v_d$ ) greater than or equal to 35 and a density ( $\rho$ ) is less than or equal to  $4.5 \text{ g/cm}^3$ .

Claims 7 to 15 (canceled).

16(new). The optical element as defined in claim 1, wherein said optical glass is a lanthanate borate glass, said lanthanate borate glass necessarily comprises  $\text{La}_2\text{O}_3$ ,  $\text{B}_2\text{O}_3$  and  $\text{ZrO}_2$  and said lanthanate borate glass includes either  $\text{Y}_2\text{O}_3$  or  $\text{Nb}_2\text{O}_5$ , and wherein a sample of said lanthanate borate glass with a 25 mm thickness has a spectral transmission purity degree of at least percent 70.8 percent at a wavelength of 400 nm and a partial dispersion of no more than 0.567 in the blue spectral region.

17(new). The optical element as defined in claim 1, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	30 to 45
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5
PbO	0.1 to 5

Li <sub>2</sub> O	0 to 10
Na <sub>2</sub> O	0 to 10
K <sub>2</sub> O	0 to 10
Rb <sub>2</sub> O	0 to 10
Cs <sub>2</sub> O	0 to 10
MgO	0 to 8
CaO	0 to 8
SrO	0 to 8
BaO	0 to 8
ZnO	1 to 10
TiO <sub>2</sub>	0 to 5
ZrO <sub>2</sub>	1 to 10
Y <sub>2</sub> O <sub>3</sub>	1 to 8
Yb <sub>2</sub> O <sub>3</sub>	0.1 to 2
Gd <sub>2</sub> O <sub>3</sub>	0.1 to 5
Nb <sub>2</sub> O <sub>5</sub>	0.1 to 10
with MgO+CaO+SrO+BaO	0 to 10
with Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O+Rb <sub>2</sub> O+Cs <sub>2</sub> O	0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of SO<sub>4</sub><sup>-2</sup>, Cl<sup>-</sup>, Sb<sub>2</sub>O<sub>3</sub>, As<sub>2</sub>O<sub>3</sub>, SnO<sub>2</sub> and CeO<sub>2</sub>.

18(new). The optical element as defined in claim 1, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	35 to 50
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5
$\text{SiO}_2$	0 to 8
$\text{GeO}_2$	0.5 to 15
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 2
$\text{BaO}$	0.1 to 7
$\text{ZnO}$	0 to 5
$\text{ZrO}_2$	0.1 to 8
$\text{Y}_2\text{O}_3$	0.1 to 6
$\text{Gd}_2\text{O}_3$	0 to 5
$\text{Nb}_2\text{O}_5$	1 to 10
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at

least one refining agent is selected from the group consisting of  $\text{SO}_4^{2-}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

19(new). The optical element as defined in claim 1, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	40 to 55
$\text{B}_2\text{O}_3$	22 to 32
$\text{Al}_2\text{O}_3$	0 to 5
$\text{SiO}_2$	1 to 8
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 2
$\text{ZnO}$	0.5 to 6
$\text{TiO}_2$	0 to 3
$\text{ZrO}_2$	2 to 10
$\text{Y}_2\text{O}_3$	3 to 11
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

20(new). The optical element as defined in claim 1, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	10 to 16
$\text{B}_2\text{O}_3$	1 to 8
$\text{Al}_2\text{O}_3$	0 to 3
$\text{SiO}_2$	20 to 30
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 8
$\text{ZnO}$	1 to 8
$\text{ZrO}_2$	0.5 to 6
$\text{TiO}_2$	3 to 11
$\text{Nb}_2\text{O}_5$	10 to 18
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{2-}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

21(new). The read-and-write device as defined in claim 5 or 6, wherein said density ( $\rho$ ) that is less than or equal to  $4.3 \text{ g/cm}^3$ .

22(new). The read-and-write device as defined in claim 5 or 6, wherein a sample of said optical glass with a 25 mm thickness has a spectral transmission purity degree of at least percent 70.8 percent at a wavelength of 400 nm and a partial dispersion of no more than 0.567 in the blue spectral region.

23(new). The read-and-write device as defined in claim 5 or 6, wherein said optical glass is a lanthanate borate glass, said lanthanate borate glass necessarily comprises  $\text{La}_2\text{O}_3$ ,  $\text{B}_2\text{O}_3$  and  $\text{ZrO}_2$  and said lanthanate borate glass includes either  $\text{Y}_2\text{O}_3$  or  $\text{Nb}_2\text{O}_5$ .

24(new). The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	30 to 45
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5

PbO	0.1 to 5
Li <sub>2</sub> O	0 to 10
Na <sub>2</sub> O	0 to 10
K <sub>2</sub> O	0 to 10
Rb <sub>2</sub> O	0 to 10
Cs <sub>2</sub> O	0 to 10
MgO	0 to 8
CaO	0 to 8
SrO	0 to 8
BaO	0 to 8
ZnO	1 to 10
TiO <sub>2</sub>	0 to 5
ZrO <sub>2</sub>	1 to 10
Y <sub>2</sub> O <sub>3</sub>	1 to 8
Yb <sub>2</sub> O <sub>3</sub>	0.1 to 2
Gd <sub>2</sub> O <sub>3</sub>	0.1 to 5
Nb <sub>2</sub> O <sub>5</sub>	0.1 to 10
with MgO+CaO+SrO+BaO	0 to 10
with Li <sub>2</sub> O+Na <sub>2</sub> O+K <sub>2</sub> O+Rb <sub>2</sub> O+Cs <sub>2</sub> O	0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .



25(new). The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	35 to 50
$\text{B}_2\text{O}_3$	30 to 40
$\text{Al}_2\text{O}_3$	0 to 5
$\text{SiO}_2$	0 to 8
$\text{GeO}_2$	0.5 to 15
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 2
$\text{BaO}$	0.1 to 7
$\text{ZnO}$	0 to 5
$\text{ZrO}_2$	0.1 to 8
$\text{Y}_2\text{O}_3$	0.1 to 6
$\text{Gd}_2\text{O}_3$	0 to 5
$\text{Nb}_2\text{O}_5$	1 to 10
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 10;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{2-}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

26(new). The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	40 to 55
$\text{B}_2\text{O}_3$	22 to 32
$\text{Al}_2\text{O}_3$	0 to 5
$\text{SiO}_2$	1 to 8
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 2
$\text{ZnO}$	0.5 to 6
$\text{TiO}_2$	0 to 3
$\text{ZrO}_2$	2 to 10
$\text{Y}_2\text{O}_3$	3 to 11
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .

27(new). The read-and-write device as defined in claim 5, wherein said optical glass is a lanthanate borate glass with a composition, in percent by weight based on oxide content, which consists of:

$\text{La}_2\text{O}_3$	10 to 16
$\text{B}_2\text{O}_3$	1 to 8
$\text{Al}_2\text{O}_3$	0 to 3
$\text{SiO}_2$	20 to 30
$\text{Li}_2\text{O}$	0 to 10
$\text{Na}_2\text{O}$	0 to 10
$\text{K}_2\text{O}$	0 to 10
$\text{Rb}_2\text{O}$	0 to 10
$\text{Cs}_2\text{O}$	0 to 10
$\text{SrO}$	0 to 8
$\text{BaO}$	0 to 8
$\text{ZnO}$	1 to 8
$\text{ZrO}_2$	0.5 to 6
$\text{TiO}_2$	3 to 11
$\text{Nb}_2\text{O}_5$	10 to 18
With $\text{Li}_2\text{O}+\text{Na}_2\text{O}+\text{K}_2\text{O}+\text{Rb}_2\text{O}+\text{Cs}_2\text{O}$	0 to 8;

and from 0 to 1.5 percent by weight of at least one refining agent, wherein said at least one refining agent is selected from the group consisting of  $\text{SO}_4^{-2}$ ,  $\text{Cl}^-$ ,  $\text{Sb}_2\text{O}_3$ ,  $\text{As}_2\text{O}_3$ ,  $\text{SnO}_2$  and  $\text{CeO}_2$ .